File [redacted] 25X1

Wait WE [redacted] 25X1

Rec'd ED 7/23/59 1400

July 17, 1959

[redacted] ILLEGIB

Dear Sir: [redacted]

This summary report on Task Order No. HH discusses the development of a specialized cutting device for use in [redacted] 25X1 [redacted] and covers the activity of the program 25X1 from February 4 through April 30, 1959.

The effort performed included a study of [redacted] 25X1 rotary and reciprocating cutting tools, and power sources for the cutting tools. The most promising cutting devices were evaluated. A hand-operated implement utilizing tapered high-speed-steel burs, 1/8, 3/16, 1/4, and 3/10 inch in diameter, was selected as the unit that satisfied your requirements. Two of these cutting devices were prepared in kit form and were sent to you for field test and evaluation. In addition, several variations of the selected implement and miscellaneous burs were transmitted to you for evaluation.

Engineering Activity

This research program was based on a discussion during which you described the problems associated with [redacted] 25X1 The primary problem in [redacted] related to this program 25X1 stems from the lack of space [redacted] for the use of the 25X1 [redacted]. This research program was directed toward 25X1 the design and development of an experimental cutting device which

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could be used to modify the [redacted] so as to facilitate the use of special tools [redacted] 25X1 25X1

In order to be effective, the desired cutting implement has to be small, compact, lightweight, quiet in operation, and relatively inexpensive, and has to include its own power supply, if needed. Further, the cutting device has to be capable of removing [redacted] you estimated that a desirable tool should be able to cut out one of these [redacted] in 5 minutes or less. 25X1 25X1 25X1

It was originally contemplated that an appropriate design for such a cutting device would incorporate a file or saw in a rotary- or reciprocating-type hand implement. It was also expected that such a device might require an attachment to position the unit [redacted] and to aid in maintaining the cutting action of the tool. Therefore, for the purpose of analysis, the problems associated with the design and development of a suitable cutting device were divided into three groups: 25X1

(1) The cutting tool

(2) The hand-operated device, i.e., the unit which holds the cutting tool

(3) The method of attachment and the adjustment of the implement relative to [redacted]. 25X1

Preliminary Study

To initiate the effort under this program, a study was made [redacted] A variety of cutting tools were 25X1

then selected for evaluation, involving the [redacted] using primarily manually and battery-powered holding devices. The details of the effort performed are presented in the following. 25X1

[redacted] 25X1

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25X1

[redacted]

Future Work

After the different-sized cutters and the various types of "handles" for the cutters have evaluated by you, there may be a need for finalizing the design of a kit incorporating the various associated tools and devices. We would be glad to be of help in connection with this and/or with any further effort on such cutting implements.

We would appreciate any comments that you or your associates might care to make with regard to the results of the effort under Task Order No. HH.

Sincerely,

[redacted]

25X1

ABW:mlm
In Triplicate